



# NORLITE, LLC

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November 14, 2014

Ms. Nancy Baker  
Deputy Regional Permit Administrator  
New York State Department of Environmental Conservation  
Region 4  
1130 North Westcott Road  
Schenectady, NY 12306-2014

RETURN RECEIPT REQUESTED VIA EMAIL

Mr. Robert Buettner  
Air Compliance Branch  
United States Environmental Protection Agency  
Region 2  
290 Broadway  
New York, NY 10007-1866

RETURN RECEIPT REQUESTED VIA EMAIL

Re: Norlite Corporation-MACT Excessive Exceedances Report  
Kiln 1: 10/01/14 – 10/24/14  
Kiln 2: 10/01/14 – 10/24/14

Dear Sir/Madam:

In accordance with 40 CFR 63.1206(c)(3)(vi), the Norlite, LLC (Norlite) is submitting an "Excessive Exceedance Report" for the timeframe of 10/01/14 thru 10/24/14. The attached document explains each of the "malfunctions" for Kilns One and Two.

The results of the investigation concluded a majority of the waste feed cutoffs were a result of the limits associated with the stack gas flow monitor. The Kiln 1 Optical Flow Sensor has been experiencing a film that has been developing on the lenses, causing a loss of signal and ultimately the unit to fault. The unit remains faulted until the lenses are cleaned. Norlite suspects the colder outside ambient air temperature may be causing a chemical precipitation to occur on the lenses. Samples have been taken of the film to try to identify what it is. Once identification has been made then a solution can be determined from there.

The Kiln 2 unit has had several issues which have affected the stack gas probe. The Kiln 2 shutdown on October 14, 2014 for routine maintenance which included cleaning of the scrubber, baghouse systems, and other typical items. After the shutdown, increased stack gas cutoffs were seen which were attributable to a pin-hole occurring on the heat probe of the stack flow rate monitoring unit. The pin-hole cause false high readings to occur which Norlite addresses by switching to another certified stack gas probe. After the probe switch, high stack gas flow rate reading started occurring a couple days later. Kiln 2 was shutdown again on November 03, 2014 for scrubber inspection and maintenance. The inspection found the MMV of the Venturi Scrubber was partially plugged with soda ash solids and baghouse dust. The MMV and the rest of the scrubber were cleaned and the kiln started back up.

Norlite has been working to resolve stack gas span cutoffs in general for almost two years. Norlite has been working with the DEC to install a new optical flow technology to monitor stack gas flow rate. A test unit has been installed on Kiln 1 and RATA tested on November 26, 2013. The final RATA Testing report was submitted along with a proposal for implementing official use of the unit to the DEC on December 24, 2013. Norlite prepared and submitted a permit modification request to the Department on March 25, 2014 and received approval for the permit modification on April 16, 2014. On April 18, 2014 at 1:00 PM, Norlite placed the Optical Flow Sensor for Kiln 1 into certified operation. Since April 18<sup>th</sup>, there have been no stack gas flow rate cutoffs which have occurred on Kiln 1. The previous stack gas flow rate measuring technology has remained in place for data collection but is no longer part of the AWFCO system. Since receiving approval for the Kiln 1 permit modification, Norlite has ordered

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## NORLITE, LLC

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and installed an optical flow sensor on Kiln 2. On May 27<sup>th</sup>, Norlite conducted preliminary testing and data collection on the Kiln 2 unit to further help setup and troubleshooting. Norlite is conducting additional troubleshooting of the Kiln 2 unit by move its location in the ductwork to see if operation improves. The step after that will be to install a new unit to see if that unit experiences the same operational issues. Norlite still feels it is very possible to have an optical flow sensor in certified operation on Kiln 2 by the end of 2014. Once passing RATA results are obtained, Norlite will prepare a permit modification similar to the Kiln 1 permit modification for submittal and approval for Kiln 2.

Norlite has been working with the DEC to improve LGF delivery and handling at the kilns to address these types of cutoffs. In April 2013, the DEC conditionally approved Norlite's plan to remove the minimum LGF Line Pressure requirement, allow a positive displacement pump to be used for fuel flow control, and allow the use of a recirculation line for use during times when off LGF. The DEC also requested a six month study be conducted without a minimum LGF Line Pressure requirement. The study was started on May 01, 2013 and completed on October 31, 2013. Norlite conducted an extensive search for a positive displacement pump which would allow variable speed control, have tight pump tolerance, and have suitable reliability for long term use. The results of the six month study which summarized over 4 million lines of operational data between the two kilns was submitted to the DEC on December 5, 2013. Based from the results of the six month study, Norlite feels the data supports the removal of the minimum LGF Line Pressure requirement. Norlite has concluded that a positive displacement pump which meets all the needed criteria does not exist. As stated previously, Norlite has acquired the assistance of a process engineering firm to assist in the search for a suitable positive displacement pump and conduct an overall review of the entire kiln feed system to provide a proposal for improving the kiln fuel feed system. The process engineering firm has been supplied with facility drawings, had several discussions with Norlite personnel, and taken a facility tour to better understand the facility operations as they relate to fuel delivery at the kilns. Norlite submitted a proposal provided by SPEC Engineering to the DEC on December 31, 2013 for review and approval. The proposal was to use an automated control loop to control pressures and fuel flow rates at the kilns. On January 13, 2014, the DEC approved the overall concept of the proposal with the requirement that additional engineering specifications be provided by certain dates for ultimate approval of the entire project.

Norlite and SPEC Engineering have completed an extensive hydraulic study of the entire LGF Fuel delivery system to ensure that proper velocities can be maintained throughout the piping system to prevent material buildup and keep the LGF homogeneously mixed. Norlite and SPEC Engineering have also meet with the DEC or spoke with the DEC on the phone several times to go over the hydraulic study as well as keep the Department up to date on the overall progress of the project. Norlite and SPEC Engineering have finalized the engineering design of the overall kiln fuel delivery system, including 3D drawings of the piping to help visualize the overall project. Norlite and SPEC have confirmed their commitment to ensuring the kiln fuel delivery system operates as expected with as few troubleshooting issues as possible. For this to occur, additional engineering was needed during the design phase. Norlite met with the DEC in early April to go over the fuel piping layout and other related engineering design aspects. SPEC has finalized the bid packages which Norlite and Tradebe Engineering have approved and released for bid. Norlite expects to select a contractor to complete the piping work by November 17, 2014. Once a contractor has been selected, Norlite has a timeframe which sees the project completed for both kilns by the end of February 2015. An engineering package has been supplied to the NYSDEC for review and approval. While the DEC reviews the engineering design, Norlite will continue with procurement and installation.

All of the malfunctions that occurred were consistent with our Startup, Shutdown and Malfunction Plan (SSMP). As approved by the NYSDEC on February 6, 2006, these reports are being sent electronically.



# NORLITE, LLC

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Should you have any questions regarding this letter, please contact me at (518) 235-0401 or email at: [tom.vanvranken@tradebe.com](mailto:tom.vanvranken@tradebe.com).

Sincerely,

*Thomas Van Vranken*

Thomas Van Vranken  
Environmental Manager

## Attachments

ecc: Don Spencer, NYDEC – R4 w/attachments  
Thomas Killeen, NYSDEC – CO w/attachments  
Joseph Hadersbeck, NYSDEC – R4w/attachments  
Jim Quinn, NYSDEC – R4 w/attachments  
Tita LaGrimas – Tradebe



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 1  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/1/2014	7:08:21	10/1/2014	7:09:04	0:00:43	231	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/1/2014	7:09:18	10/1/2014	7:09:55	0:00:37	232	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/1/2014	10:23:39	10/1/2014	10:52:23	0:28:44	233	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Was Shutdown on 10/06/14 for Maintenance
10/3/2014	8:10:12	10/3/2014	8:20:11	0:09:59	234	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Was Shutdown on 10/06/14 for Maintenance
10/3/2014	15:32:47	10/3/2014	15:52:18	0:19:31	235	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Was Shutdown on 10/06/14 for Maintenance
10/3/2014	22:19:28	10/3/2014	23:32:27	1:12:59	236	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/4/2014	22:25:38	10/4/2014	23:00:12	0:34:34	237	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Was Shutdown on 10/06/14 for Maintenance
10/5/2014	2:24:53	10/5/2014	3:11:29	0:46:36	238	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength. Kiln 1 Was Shutdown on 10/06/14 for Maintenance
10/8/2014	16:00:37	10/8/2014	16:29:24	0:28:47	239	Malfunction	Instantaneous Instrument Setpoint Was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Becoming Dirty and Losing Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/9/2014	2:34:19	10/9/2014	2:34:45	0:00:26	240	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Scrubber pH Span Due to the Sample Loop Being Plugged With Soda Ash Solids	Scrubber pH	Span	I&E Cleaned the Sample Loop
10/9/2014	2:56:11	10/9/2014	2:56:31	0:00:20	241	Malfunction	I&E Tech went to Clean the Active Probe and did not Communicate to the Kiln Operator to Switch the pH Probes, Causing the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber pH Span	Scrubber pH	Span	I&E Cleaned the Probe and Calibrated It to Ensure Proper Operation
10/13/2014	1:32:14	10/13/2014	1:44:40	0:12:26	242	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 1  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/14/2014	9:03:02	10/14/2014	9:25:28	0:22:26	243	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/16/2014	16:31:30	10/16/2014	16:52:53	0:21:23	244	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/17/2014	9:27:33	10/17/2014	9:46:10	0:18:37	245	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow		Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/17/2014	10:14:29	10/17/2014	10:36:16	0:21:47	246	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/18/2014	23:56:48	10/18/2014	23:59:07	0:02:19	247	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/19/2014	0:08:24	10/19/2014	0:59:31	0:51:07	248	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/19/2014	21:31:02	10/19/2014	22:41:30	1:10:28	249	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/20/2014	19:51:56	10/20/2014	20:36:31	0:44:35	250	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/22/2014	0:39:11	10/22/2014	0:58:23	0:19:12	251	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength
10/22/2014	13:55:49	10/22/2014	13:57:25	0:01:36	252	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/22/2014	23:59:12	10/23/2014	0:00:35	0:01:22	253	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/23/2014	1:11:29	10/23/2014	1:21:27	0:09:58	254	Malfunction	Instantaneous instrument setpoint was reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 1  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/24/2014	5:27:48	10/24/2014	6:03:05	0:35:17	255	Malfunction	Instantaneous Instrument Setpoint was Reached for Stack Gas Flow Rate Span Due to the Optical Flow Sensor Lens Becoming Coated With A Film, Causing A Loss of Signal	Stack Gas Flow Rate	Span	I&E Cleaned the Lenses to Establish Proper Signal Strength Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/24/2014	22:34:59	10/24/2014	22:38:08	0:03:09	256	Malfunction	The Operators Were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/3/2014	20:21:20	10/3/2014	20:21:43	0:00:23	302	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe The Operators were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	Stack Gas Flow Rate	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/3/2014	22:11:50	10/3/2014	22:38:24	0:26:34	303	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe	LGF Flow	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/4/2014	8:15:23	10/4/2014	8:17:31	0:02:08	304	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe	Stack Gas Flow Rate	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/4/2014	15:38:31	10/4/2014	15:40:57	0:02:26	305	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe The Operators were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	Stack Gas Flow Rate	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/5/2014	22:08:35	10/5/2014	22:17:42	0:09:07	306	Malfunction	The Previous LGF Flow Rate Span Cutoff Caused a Surge in the Flame Which Caused the CO's to Rise	LGF Flow	Span	Switched to Used Oil and Waited for the HRA to Come Down Switched to Used Oil and Waited for the HRA to Come Down
10/5/2014	22:20:40	10/5/2014	23:21:10	1:00:30	307	Malfunction	Previous Stack Gas Cutoff Caused the CO's to Rise	Carbon Monoxide	Opl	Down
10/6/2014	2:59:39	10/6/2014	3:57:03	0:57:24	308	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe	Carbon Monoxide	Opl	Down The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/6/2014	7:03:27	10/6/2014	7:06:29	0:03:02	309	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe	Stack Gas Flow Rate	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/6/2014	7:11:16	10/6/2014	7:29:08	0:17:52	310	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting Probe	Stack Gas Flow Rate	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/7/2014	10:25:41	10/7/2014	10:29:24	0:03:43	311	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Soda Ash and Baghouse Dust Coating the Stack Gas Probe	Stack Gas Flow Rate	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust
10/8/2014	3:16:33	10/8/2014	3:41:46	0:25:13	312	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Soda Ash and Baghouse Dust Coating the Stack Gas Probe	Stack Gas Flow Rate	Span	I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust
10/8/2014	3:48:10	10/8/2014	5:04:47	1:16:37	313	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Soda Ash and Baghouse Dust Coating the Stack Gas Probe	Stack Gas Flow Rate	Span	I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust
10/8/2014	6:20:57	10/8/2014	9:27:35	3:06:38	314	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Soda Ash and Baghouse Dust Coating the Stack Gas Probe	Stack Gas Flow Rate	Span	I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust
10/8/2014	12:45:49	10/8/2014	13:10:56	0:25:07	315	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Soda Ash and Baghouse Dust Coating the Stack Gas Probe	Stack Gas Flow Rate	Span	I&E Cleaned the Probe/ The Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust





NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/10/2014	7:11:36	10/10/2014	7:13:49	0:02:13	316	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Soda Ash and Baghouse Dust Coating the Stack Gas Probe	Stack Gas Flow Rate	Span	1. Cleaned the Probe 2. Mist Pad Was Rinsed to Remove the Built Up Soda Ash and Baghouse Dust 3. Intra Party Process
10/11/2014	5:26:29	10/11/2014	5:27:05	0:00:36	317	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Engineers Are Reviewing the Feed System to Provide Operational Improvements The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/13/2014	14:12:37	10/13/2014	14:49:36	0:36:59	318	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	1. Intra Party Process 2. Engineers Are Reviewing the Feed System to Provide Operational Improvements 3. Intra Party Process
10/17/2014	2:39:12	10/17/2014	2:39:34	0:00:22	319	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Engineers Are Reviewing the Feed System to Provide Operational Improvements Intra Party Process
10/17/2014	2:39:40	10/17/2014	2:40:06	0:00:26	320	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay	Opl	Engineers Are Reviewing the Feed System to Provide Operational Improvements The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/17/2014	4:03:17	10/17/2014	4:28:45	0:25:28	321	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	1. The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe 2. Intra Party Process
10/18/2014	4:53:07	10/18/2014	4:54:13	0:01:06	322	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	1. The Operators were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span 2. Intra Party Process
10/20/2014	6:01:03	10/20/2014	6:01:29	0:00:26	323	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	LGF Flow	Span	Engineers Are Reviewing the Feed System to Provide Operational Improvements Intra Party Process
10/20/2014	6:02:22	10/20/2014	6:02:57	0:00:35	324	Malfunction	The Operators Were Controlling Fuel Flow Using Valve Which Caused a Fuel Surge to Occur, Affecting the Frontend Differential Kiln Pressure	Front Kiln Pressure, 1 Second Delay		Engineers Are Reviewing the Feed System to Provide Operational Improvements The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/20/2014	20:05:22	10/20/2014	20:09:44	0:04:22	325	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	1. The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe 2. Intra Party Process
10/20/2014	20:13:04	10/20/2014	20:29:01	0:15:57	326	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	1. The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe 2. Intra Party Process
10/20/2014	20:32:00	10/20/2014	20:58:10	0:26:10	327	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	1. The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe 2. Intra Party Process
10/20/2014	21:05:51	10/20/2014	21:17:28	0:11:37	328	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	1. The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe 2. Intra Party Process





NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/20/2014	21:22:19	10/20/2014	21:25:18	0:02:59	329	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/21/2014	6:30:42	10/21/2014	6:32:13	0:01:31	330	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/21/2014	8:26:31	10/21/2014	8:38:40	0:12:09	331	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/21/2014	8:41:41	10/21/2014	9:56:57	1:15:16	332	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/21/2014	10:02:03	10/21/2014	10:13:53	0:11:50	333	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/21/2014	22:55:10	10/22/2014	1:25:17	2:30:06	334	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	1:35:27	10/22/2014	1:48:21	0:12:54	335	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	1:52:49	10/22/2014	2:03:34	0:10:45	336	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	2:05:02	10/22/2014	2:14:10	0:09:08	337	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	2:30:26	10/22/2014	3:05:58	0:35:32	338	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	4:10:25	10/22/2014	4:41:55	0:31:30	339	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	7:32:37	10/22/2014	9:35:01	2:02:24	340	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	9:41:50	10/22/2014	10:21:33	0:39:43	341	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	11:22:08	10/22/2014	11:34:49	0:12:41	342	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	11:36:54	10/22/2014	12:24:10	0:47:16	343	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	12:33:38	10/22/2014	12:49:11	0:15:33	344	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	13:12:00	10/22/2014	13:35:03	0:23:03	345	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	15:21:43	10/22/2014	15:43:02	0:21:19	346	Malfunction	Back Chamber Pressure HRA	Back Chamber Pressure HRA	Opl	



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/22/2014	17:21:17	10/22/2014	17:22:53	0:01:36	347	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/22/2014	17:24:22	10/22/2014	18:23:22	0:59:00	348	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High The Operators were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14 Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/22/2014	23:59:12	10/23/2014	0:00:48	0:01:35	349	Malfunction	Setpoint to be Reached for LGF Flow Span The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	LGF Flow	Span	
10/23/2014	0:15:21	10/23/2014	0:17:01	0:01:40	350	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	2:17:34	10/23/2014	2:17:59	0:00:25	351	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	3:31:31	10/23/2014	3:32:01	0:00:30	352	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	3:32:16	10/23/2014	3:32:57	0:00:41	353	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	3:38:50	10/23/2014	4:16:53	0:38:03	354	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	4:22:33	10/23/2014	4:23:29	0:00:56	355	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	4:25:31	10/23/2014	9:35:13	5:09:42	356	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	9:49:41	10/23/2014	10:31:45	0:42:04	357	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	10:45:27	10/23/2014	11:26:21	0:40:54	358	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	11:33:03	10/23/2014	12:29:05	0:56:02	359	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14
10/23/2014	12:33:40	10/23/2014	17:11:09	4:37:29	360	Malfunction	The Stack Gas Probe Was Found to Have a Pin Hole on the Heated Probe Which Was Causing the Probe to Falsely Read High	Stack Gas Flow Rate	Span	I&E Replaced the Probe on the Afternoon of 10/23/14 The ID Fan Speed was Decreased to Help Prevent Water Droplets From Hitting the Probe
10/23/2014	17:24:59	10/23/2014	17:25:46	0:00:47	361	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe The Operators were Controlling Fuel Flow Using Valves Which Caused a Fuel Surge to Occur, Causing the Instantaneous Upper Instrument	Stack Gas Flow Rate	Span	Third Party Process Engineers Are Reviewing the Feed System to Provide Operational Improvements
10/24/2014	2:09:00	10/24/2014	2:09:26	0:00:26	362	Malfunction	Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	



NORLITE, LLC  
MACT EXCEEDANCE REPORT - KILN 2  
10/01/14 - 10/24/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
10/24/2014	13:44:24	10/24/2014	13:45:08	0:00:44	363	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	14:50:04	10/24/2014	14:51:48	0:01:44	364	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	18:59:16	10/24/2014	19:00:41	0:01:25	365	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	21:13:15	10/24/2014	21:13:38	0:00:23	366	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	21:14:02	10/24/2014	21:14:32	0:00:30	367	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	21:33:43	10/24/2014	21:34:23	0:00:40	368	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	21:44:31	10/24/2014	22:30:50	0:46:19	369	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	22:46:13	10/24/2014	23:36:07	0:49:54	370	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance
10/24/2014	22:53:23	10/24/2014	23:55:00	1:01:37	371	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	Ultimately The Kiln Was Shutdown on 11/03/14 for Scrubber Inspection & Maintenance